

intersubband transition between a bound ground energy state and an excited energy state within a common energy band where said excited energy state is substantially resonant with an energy of the well top,

wherein materials, thicknesses and dimensions of said well layers and barrier layers are selected such that said first and said second quantum well structures effect intersubband transitions at first and second wavelengths, respectively, wherein none of said two quantum well structures is short circuited, and wherein said barrier layers are sufficiently thick to substantially eliminate carrier tunneling.

In the drawings:

Please amend the drawings as marked in red ink in the attached sheets. No new matter is added.

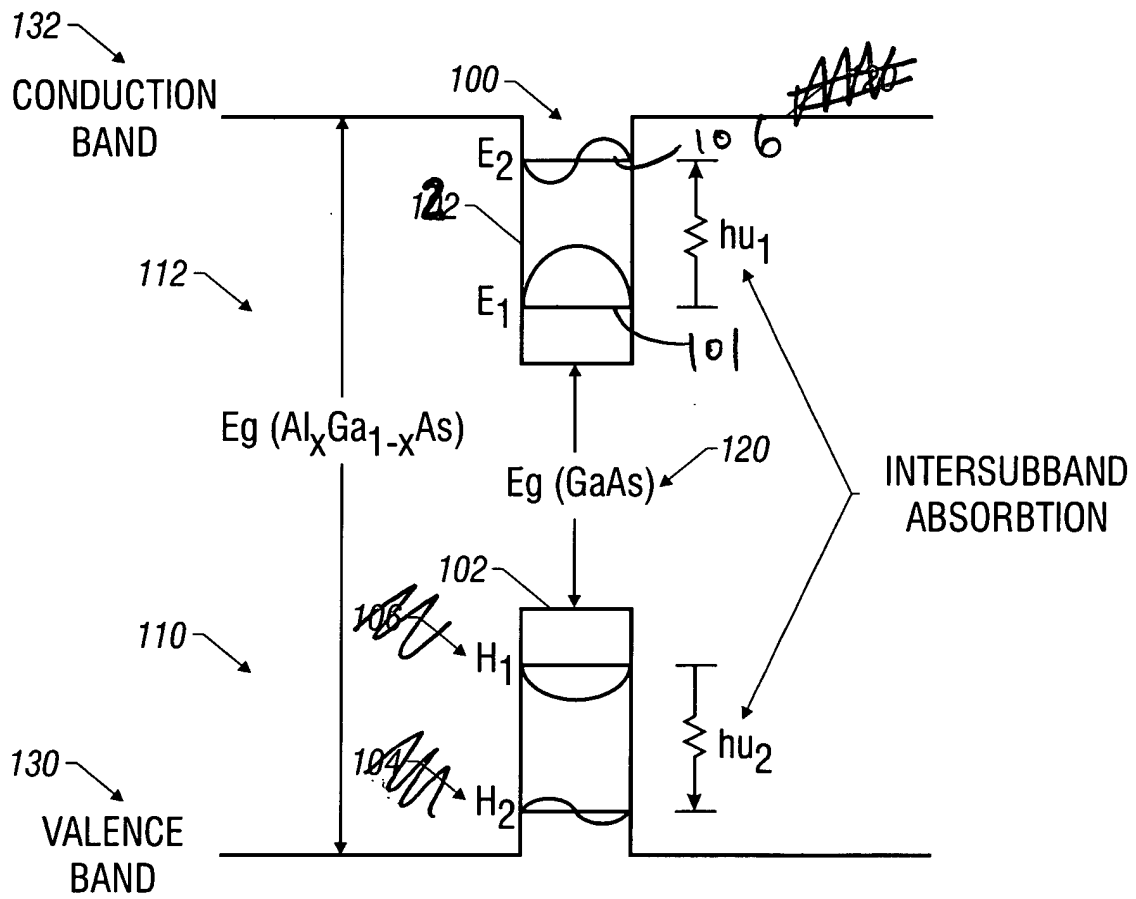


FIG. 1

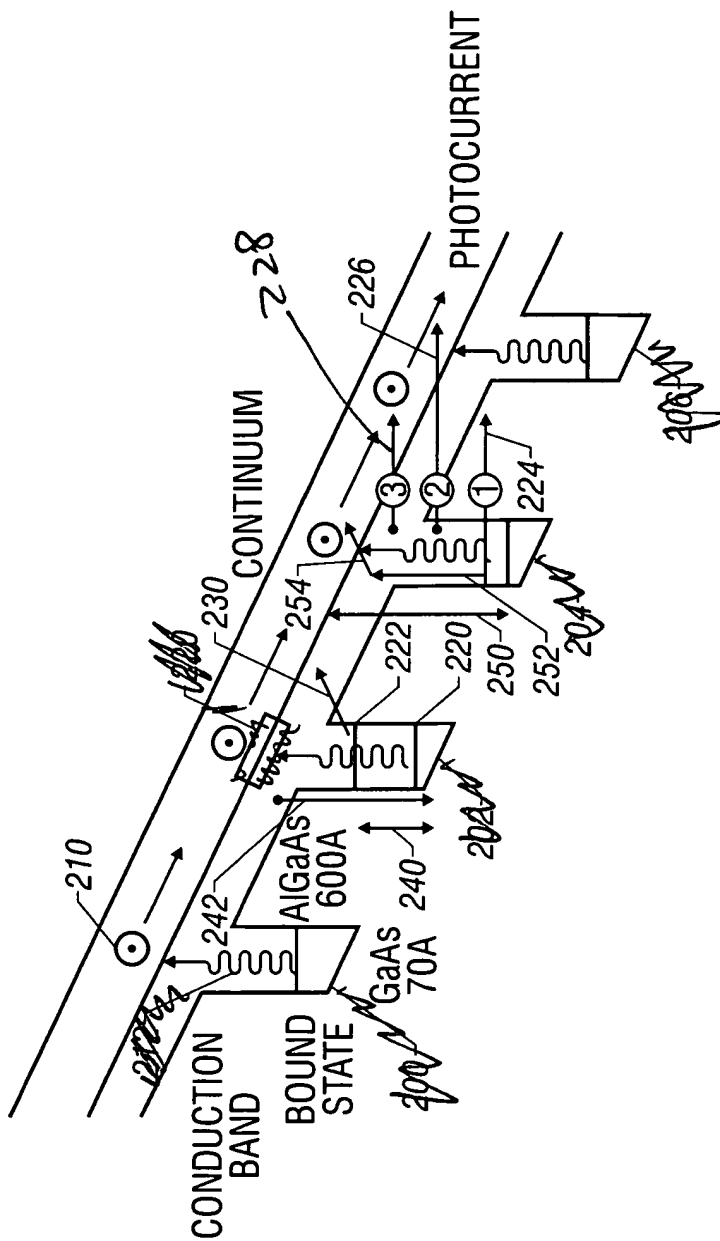


FIG. 2



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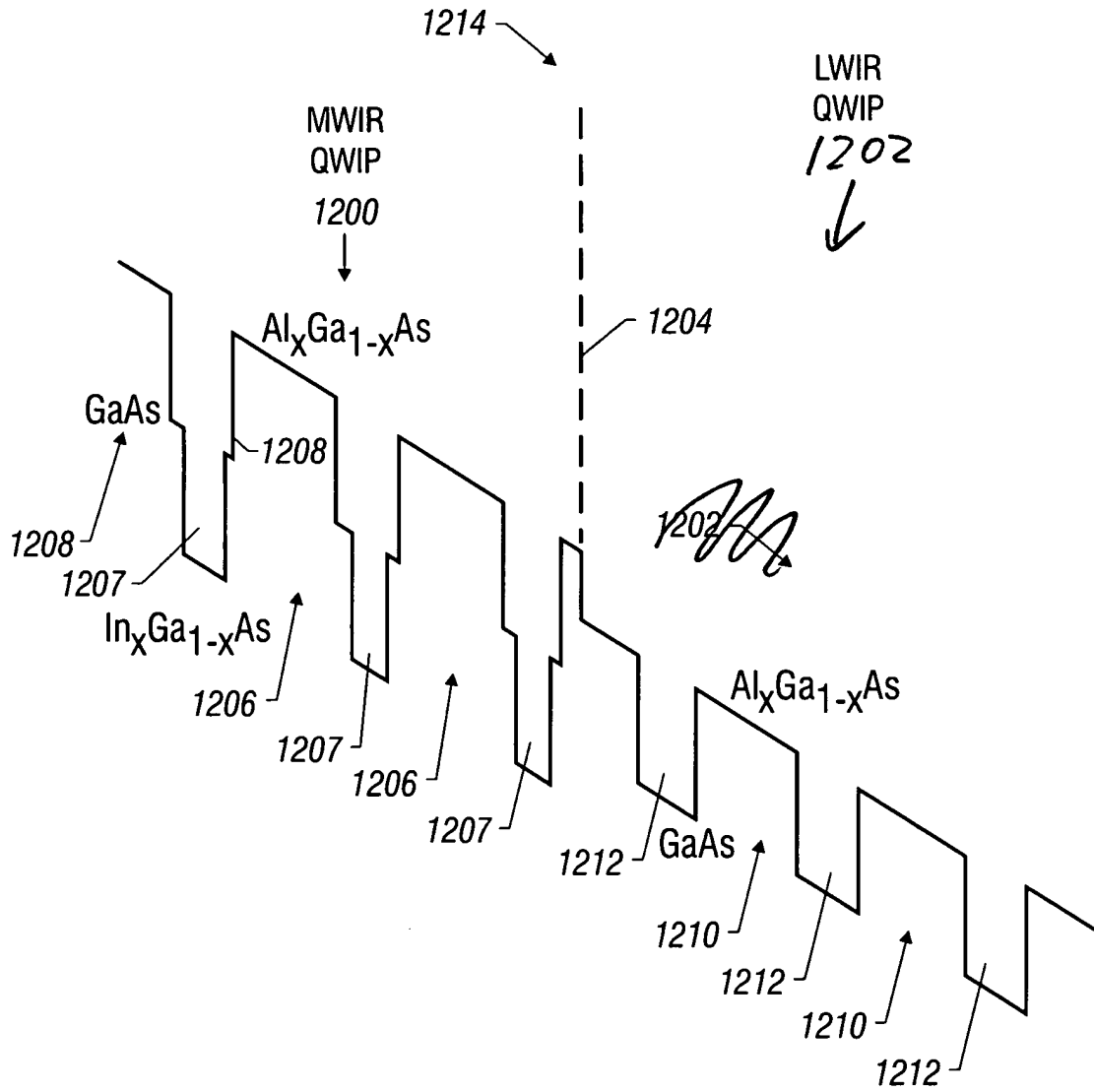


FIG. 12